Camera Lenses - W/A and Panorama Photos

I used to think that with a W/A lens I could photo more in a small place and Telephoto was for far away subjects.

But this is too simple and there is more to the choice of lens than that.

Brian Hillier

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Well, what lens should I choose – Here are 10 Canon Popular Lenses




Canon
EOS 5D
Mark II

Here is the current range of Canon Lenses – I counted 66 lenss



The various types of lenses and their uses

Rather than re-invent the wheel I found a presentation that gives a very good explanation

Camera Lenses

A Comprehensive Guide to Wide-Angle, Prime, Telephoto, and Zoom Optics

Foundations of Optics

Understanding Focal Length, Aperture, and Field of View

Focal Length & Field of View

What is Focal Length?

Measured in millimeters (mm), focal length represents the optical distance from the lens's nodal center to the camera sensor. Shorter focal lengths yield broader angles of view.

Perspective & Compression

Focal length dictates magnification and visual scaling. Wide lenses expand spatial depth, while longer focal lengths compress distance, bringing background objects closer.

Wide-Angle (W/A) Lenses

- **Focal Lengths:** Typically under 35mm (Ultra-wide < 20mm).
- **Expansive Coverage:** Captures broad fields of view ideal for landscapes, architecture, and tight interior spaces.
- **Exaggerated Depth:** Makes foreground elements prominent while pushing background elements far away.
- **Creative Geometry:** Creates dynamic leading lines and sweeping visual perspective across the frame.



Prime Lenses: Pure Optics

Fixed Focal Length Perfection

Prime lenses feature a static focal length with zero zoom mechanism. By optimizing optics for a single focal length, primes achieve exceptional corner-to-corner sharpness and minimal distortion.

Their simplified optical construction allows for ultra-fast maximum apertures (f/1.2 to f/1.8), delivering supreme low-light performance and creamy background separation (bokeh).



Telephoto Lenses: Extended Reach

Long Focal Reach

Focal lengths starting at 70mm up to 600mm+ magnify distant subjects, crucial for sports and wildlife photography.

Subject Separation

Strong optical compression isolates subjects effortlessly from complex backgrounds with shallow depth of field.

Flattering Portraits

Moderate telephotos (85mm–135mm) render human facial features naturally without wide-angle facial distortion.

Zoom Lenses: Versatility

Variable Focal Lengths

Zoom lenses house movable optical elements allowing continuous framing adjustments (e.g., 24–70mm or 70–200mm) without swapping lenses or moving physical locations.

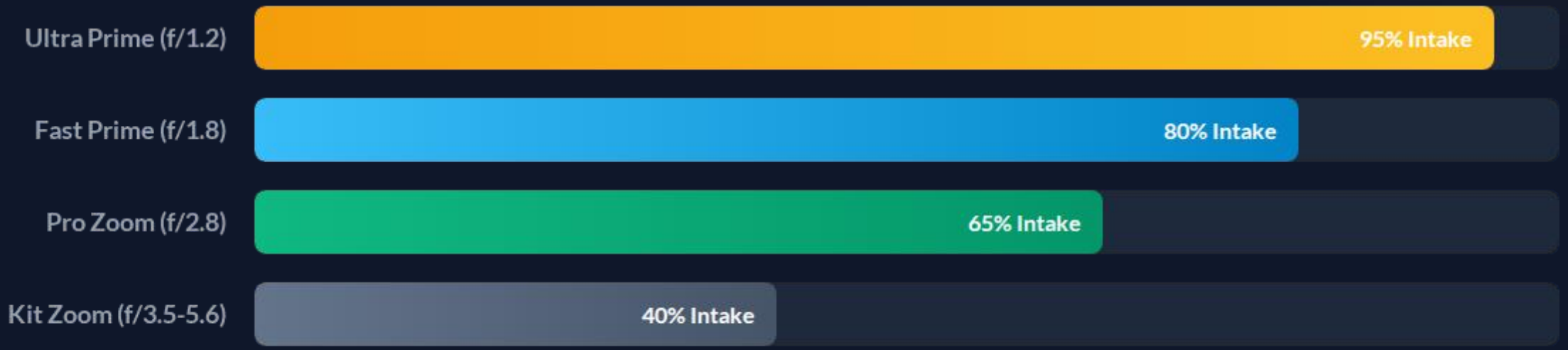
Speed & Practicality

Essential for dynamic environments like sports, weddings, and photojournalism. Modern pro zooms maintain constant f/2.8 maximum apertures across the zoom spectrum.

Lens Category Comparison

Category	Focal Range	Key Advantage	Primary Use Case
Wide-Angle	14mm – 35mm	Expansive Field of View	Landscapes & Architecture
Standard Prime	35mm – 50mm	High Sharpness & Speed	Street & Everyday Shots
Portrait Telephoto	85mm – 135mm	Bokeh & Compression	Portraits & Fashion
Super Telephoto	200mm – 600mm+	Extreme Magnification	Sports & Wildlife
Standard Zoom	24mm – 70mm	Rapid Framing Flexibility	Events, Travel & News

Aperture & Light Gathering



Prime lenses offer significantly wider maximum apertures, permitting greater light gathering in low light and producing superior shallow depth-of-field separation compared to variable zoom optics.

The Natural Perspective

50mm

Standard Lens Baseline

The Human Eye Standard

The 50mm focal length on a full-frame sensor is widely regarded as the gold standard for natural perspective. It replicates the magnification and spatial rendering of human vision without wide distortion or telephoto compression.

Visual Applications in Action



Wide Angle: Fits expansive vistas and deep landscape scale into a single frame.



Prime Portrait: Delivers razor-sharp eyes with buttery soft background blur.



Telephoto Action: Isolates fast-moving athletes from distant vantage points.

Questions & Discussion

Selecting the right optic transforms your visual storytelling.

Photography & Optics Guide | lens-guide@photography.edu

Image Sources

https://cdn.fstoppers.com/styles/large_16_9/s3/lead/2025/08/wide-angle-lens-landscape-photography-tips---youtube---0-1-35.jpeg.webp?itok=cQW4IJIG

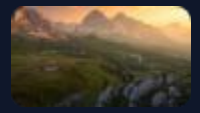


Source: fstoppers.com



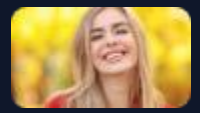
https://www.macfilos.com/wp-content/uploads/2026/01/L-Mount_50mm_lenses_jpr_P1170037.jpg

Source: www.macfilos.com



https://thephotohikes.com/wp-content/uploads/2025/11/Dolomites-Hiking-and-photo-spots-guide-11.jpg

Source: thephotohikes.com



https://www.adorama.com/alc/wp-content/uploads/2011/10/shutterstock_757785604.jpg

Source: www.adorama.com



https://cdn.media.amplience.net/i/canon/canon-pro-tom-jenkins-sports-tips-1-1140?$og-image$

Source: www.canon-europe.com

Panorama Photography

Definition of a panoramic image

A good definition of a panoramic image might be, an image that is at least twice the width of its height, depending on its orientation, and an image that is at least 2:1 format or wider.

Generally, the 3:1 format , or thereabouts, tends to be thought of as the classic standard for panoramic images, but this is a throwback to film era camera, such as Hasselblad Xpan (24x65mm or 2,7:1 and Fuji 517 (6x 17cm or 2.8:1)

It doesn't really matter whether the image is shot with an ultra-wide lens, then cropped, or a series of images are taken and stitched together. If the resulting image is 2:1 or wider it can be called a panoramic image.

Panorama photos – David Speight



Interest in Panorama photos started in 1840;s.
The first cameras took film between 5 -16 inches wide and up to 20 feet long.

How to make panorama photos

- Camera takes a series of adjacent photos which are joined together with photo editing software, or

- Camera's option PANO – records continuous image as camera is panned.

- Photo editing software to stitch or only adjust the final print size

- Printer that can print longer that A4. My Epson 8500 can print on paper that is 210 mm wide and up to 6 metres long

- Photo paper, available in precut sheets, 210mm by 600mm, other sizes, and rolls.

- Or send your image to a photo printing company.

Panorama made by overlapping photos with editing software



Malham in Yorkshire Dales, The dry-stone walls highlight shape of hills



Taken in portrait orientation: 10 photos joined together, 70mm, 1/30 - f11 - ISO 100.
Cropped to a 3:1 width-to-height ratio.

Loch Leven



Image made with 8 frames in portrait mode with 90mm lens, 1/25 f8, ISO 100

Equipment for panoramic photography – Tripod or iphone

1. Tripod with pan and tilt head, not a "Ball and Socket

2. The Head should be capable of horizontal and vertical movement

3. Possible Parallax problem – *We have not discussed this*
    1. Can occur when stitching W/A frames.
    2. Panoramic Heads and nodal rails allow the camera tp move slightly
    3. This permits use of lenses wide than 50mm.

4. Stitching frames required photo editing skills or a software app

5. I want to show the PANO option of taking a panoramic photo

Panorama Photo Printing Paper



Fotospeed Panoramic 210mm x 594mm...



Fotospeed Smooth Pearl 290 Photo Paper -...



Why not try Lining paper

Panorama of Hartshill Close



I wanted to make a panorama of the Bayeaux tapestry



I am using the iphone Pano mode to make a panorama photo



Cost of having a panorama photo printed – Some retailers

Popular UK Retailers & Pricing

- **Snapfish UK:** Small (like 14" x 4") start around **£2.19 to £3.99** with larger options like 22" x 5" and 36" x 8"
- **ASDA photo: £15.00** (20" x 8"), **£23.00** (30" x 10"), **£36.00** (60" x 20")
- **Postsnap: £5.00** (20" x 8") up to **£14.00** (36" x 12")
- **Smartphoto:** Small (10 x 20 cm or 10 x 18 cm) range from about **£0.20 to £0.70** per piece depending on quantity]
- **Crewe:** Aluminium/Acrylic **£39.99** (45 x 30cm)

I wanted to present a general insight
into making panorama photos

One can always find out more detail on the Interent.

I hope you found it of interest

Thank you for watching